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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,404	07/01/2003	Jay W. Yarbrough	21089 . 00	9426

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LITMAN LAW OFFICES, LTD
PO BOX 15035
CRYSTAL CITY STATION
ARLINGTON, VA 22215

EXAMINER	
WILLIAMS, ROSS A	
ART UNIT	**PAPER NUMBER**
3713	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/609,404	YARBROUGH ET AL.	
	Examiner	Art Unit	
	Ross A. Williams	3713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7-1-2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 9 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims state that the backlight emits different colors. The claim is unclear as to what exactly the backlight is emitting. The Examiner will assume that the Applicant means that the backlight device emits different colored light for examination purposes.

Claim 1 recites the limitation "said first and second panels" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "said first panel" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US 4,751,506) in view of Schoniger (US 5,678,334).

Regarding claim 1, Brown discloses a scoreboard display device that comprising a transparent panel (Brown 1:40). The surface of the transparent panel has the words "home" and "away" printed on it (Brown Fig 1). Thus the panel has text and since textual characters are also considered graphics, the transparent panel also has graphics printed on it. Brown discloses a container with at least three grooves for holding the transparent panel (Brown Figs 4, 5). Brown discloses that the system is programmed to display numeric displays that are seven segment displays, by means of switches of the control panel. Brown also discloses electronics and electronically programmable numeric display mounted on a pc board (Brown 1:44 – 52, Fig 2). Brown also discloses a control panel that is connected to the display device that has a plurality of switches that are connected to a control board that are used for the controlling of the numeric displays on the display unit, wherein the numerical display comprises light emitting diodes that independently light up and illuminate segments (Brown 1:53 – 56). Brown does not disclose a backlighting device that the shines light through the edge of

the transparent panel or switches that are contained in the display housing for changing a numerical display. Schoniger discloses an illuminating sign that is comprised of a transparent panel that fits into a groove wherein LED's are located inside the groove (Schoniger 3:30 – 67). The LED's thus shine light through the length of the transparent panel thus producing a highly visible sign with an even light distribution by means of an opaque backing film. Schoniger also discloses the use of different colored LED's wherein the LED's can be activated by means of switches to change the colors of the sign by switching the LED's (Schoniger 3:60 – 65). Thus, Schoniger discloses the uses of switches in the display housing to control the activation of *LED's* of different colors that illuminate the transparent panel. Brown discloses the use of switches in a control unit to activate and change the numerical displays on the scoreboard. The numerical displays of Brown also consist of *LED's* that make up segments of a seven-segment display.

One of ordinary skill in the art would be motivated to modify Brown in view of Schoniger to provide a display device that provides illumination to a transparent panel by shining light through one of the edged of the panel thus providing even illumination to the panel, as well as to provide switches in the display housing to control the LED's of the numerical display. One would be motivated to do so since Schoniger discloses the problem of previous systems not be able to provide an even distribution of light over the backlit panel (Schoniger 1:35 – 38). Switches in the housing of the display device would provide a convenient means to activate a variety of LED's.

Regarding claim 4, Brown does not disclose the use of switches to control the backlighting device to emit different colors light. Schoniger also discloses the use of different colored LED's wherein the LED's can be activated by means of switches to change the colors of the sign by switching the LED's (Schoniger 3:60 – 65). Thus, Schoniger discloses the uses of switches in the display housing to control the activation of *LED's* of different colors that illuminate the transparent panel.

One of ordinary skill in the art would be motivated to modify Brown in view of Schoniger to provide a display device that changes the color of light that is emitted from the backlight device. Different colored lights commonly have different meanings or significance depending on the circumstances or setting. For example red might mean something negative and the color green might mean something positive.

Regarding claim 5, Brown discloses that the numerical display is a multi-digit seven-segment display that consists of a light emitting diode array (Brown 4:44 – 54).

Regarding claim 6, Brown discloses the use of microchips in the circuit boards of the scoreboard (Brown Fig 2).

Claims 2, 3, 7 – 13, 15 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US 4,751,506) in view of Schoniger (US 5,678,334) as applied above and in further view of Day (GB 2139796).

Regarding claims 2 and 3, Brown discloses a scoreboard wherein the front panel of the scoreboard has graphics or text which is which are written on the panel (Brown Fig 1). The text effectively describes the numerical significance of the numerical

displays underneath, such as the home and away team scores. Brown does not disclose that the text or graphics can be engraved. Day discloses a method of providing edge illumination to a sign wherein the sign has a pattern or information engraved on the face of the panel. By making grooves in the face of the panel or sign, when light is shined along the edge of the panel the light is reflected down the panel thus enhancing the illumination of the information that is engraved on the face of the panel (Day page 1, col 1:lines 25 – 64).

One of ordinary skill in the art would be motivated to modify Brown in view of Schoniger and in further view of Day to provide a panel that has engravings that represent information that is shown by a numerical display, such as a seven-segment display. By engraving information and illuminating the panel by means of edge illumination the sign would be more visible to an observer.

Regarding claims 7 and 10, Brown discloses that the numerical display is a multi-digit seven-segment display that consists of a light emitting diode array (Brown 4:44 – 54).

Regarding claims 8 and 11, Brown discloses the use of microchips in the circuit boards of the scoreboard (Brown Fig 2).

Regarding claim 9, Brown does not disclose the use of switches to control the backlighting device to emit different colors light. Schoniger discloses the use of different colored LED's wherein the LED's can be activated by means of switches to change the colors of the sign by switching the LED's (Schoniger 3:60 – 65). Thus, Schoniger

discloses the uses of switches in the display housing to control the activation of *LED's* of different colors that illuminate the transparent panel.

One of ordinary skill in the art would be motivated to modify Brown in view of Schoniger to provide a display device that changes the color of light that is emitted from the backlight device. Different colored lights commonly have different meanings or significance depending on the circumstances or setting. For example red might mean something negative and the color green might mean something positive.

Regarding claims 12 and 18, Brown discloses a scoreboard display device that comprising a transparent panel (Brown 1:40). The surface of the transparent panel has the words "home" and "away" printed on it (Brown Fig 1). Thus the panel has text and since textual characters are also considered graphics, the transparent panel also has graphics printed on it. Brown discloses a container with at least three grooves for holding the transparent panel (Brown Figs 4, 5). Brown discloses that the system is programmed to display numeric displays that are seven segment displays, by means of switches of the control panel. Brown also discloses electronics and electronically programmable numeric display mounted on a pc board (Brown 1:44 – 52, Fig 2). Brown also discloses a control panel that is connected to the display device that has a plurality of switches that are connected to a control board that are used for the controlling of the numeric displays on the display unit, wherein the numerical display comprises light emitting diodes that independently light up and illuminate segments (Brown 1:53 – 56). Brown does not disclose a backlighting device that the shines light through the edge of

the transparent panel or switches that are contained in the display housing for changing a numerical display. Schoniger discloses an illuminating sign that is comprised of a transparent panel that fits into a groove wherein LED's are located inside the groove (Schoniger 3:30 – 67). The LED's thus shine light through the length of the transparent panel thus producing a highly visible sign with even light distribution by means of an opaque backing film. Schoniger also discloses the use of different colored LED's wherein the LED's can be activated by means of switches to change the colors of the sign by switching the LED's (Schoniger 3:60 – 65). Thus, Schoniger discloses the uses of switches in the display housing to control the activation of *LED's* of different colors that illuminate the transparent panel. Brown discloses the use of switches in a control unit to activate and change the numerical displays on the scoreboard. The numerical displays of Brown also consist of *LED's* that make up segments of a seven-segment display.

Regarding the use of an engraved text and graphics, Brown discloses a scoreboard wherein the front panel of the scoreboard has graphics or text written on the panel (Brown Fig 1). The text effectively describes the numerical significance of the numerical displays underneath, such as the home and away team scores. Brown does not disclose that the text or graphics can be engraved. Day discloses a method of providing edge illumination to a sign wherein the sign has a pattern or information engraved on the face of the panel. By making grooves in the face of the panel or sign, when a light is shined along the edge of the panel the light is reflected down the panel

thus enhancing the illumination of the information that is engraved on the face of the panel (Day page 1, col 1:lines 25 – 64).

One of ordinary skill in the art would be motivated to modify Brown in view of Schoniger and in further view of Day to provide a panel that has engravings that represent information that is shown by a numerical display, such as a seven-segment display. By engraving information and illuminating the panel by means of edge illumination the sign would be more visible to an observer.

One of ordinary skill in the art would be motivated to modify Brown in view of Schoniger to provide a display device that provides illumination to a transparent panel by shining light through one of the edged of the panel thus providing even illumination to the panel, as well as to provide switches in the display housing to control the LED's of the numerical display. One would be motivated to do so since Schoniger discloses the problem of previous systems not be able to provide an even distribution of light over the backlit panel (Schoniger 1:35 – 38). Switches in the housing of the display device would provide a convenient means to activate a variety of LED's.

Regarding claim 13, Brown does not disclose the use of switches to control the backlighting device to emit different colors light. Schoniger also discloses the use of different colored LED's wherein the LED's can be activated by means of switches to change the colors of the sign by switching the LED's (Schoniger 3:60 – 65). Thus, Schoniger discloses the uses of switches in the display housing to control the activation of *LED's* of different colors that illuminate the transparent panel.

One of ordinary skill in the art would be motivated to modify Brown in view of Schoniger to provide a display device that changes the color of light that is emitted from the backlight device. Different colored lights commonly have different meanings or significance depending on the circumstances or setting. For example red might mean something negative and the color green might mean something positive.

Regarding claim 15, Brown discloses the use of LED's. LED's are inherently multi-terminal.

Regarding claims 16 and19, Brown discloses that the numerical display is a multi-digit seven-segment display that consists of a light emitting diode array (Brown 4:44 – 54).

Regarding claims 17 and 20, Brown discloses the use of microchips in the circuit boards of the scoreboard (Brown Fig 2).

Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US 4,751,506) in view of Schoniger (US 5,678,334) in further view of Day (GB 2139796) as applied above and in further view of Neilson (US 2004/0166966).

Regarding claim 14, Brown discloses a transparent front panel in a scoreboard display system. Brown does not disclose a scoreboard wherein the panel has non-transparent display portions above the numerical displays to hide the electronics of the system. Neilson discloses a scoreboard display that utilizes an opaque substance that hides the inner workings of the display system (Neilson page 2:par 33).

One of ordinary skill in the art would be motivated to modify Brown in view of Schoniger, and Day and in further view of Neilson to provide a display that has non-transparent portions. The visibility of the display will be enhanced by covering up parts of the system that may detract from the displayed information.

Citation Of Pertinent Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

GB 2386460: Discloses a portable illuminated sign with edge backlighting.

US 5,685,779: Discloses an electronic scoreboard.

US 6,294,983: Discloses an emergency exit light in that is illuminated by LED's.

US 2004/0004827: Discloses an illuminated sign by means of edge lighting.

US 5,664,862: Discloses a panel display that is illuminated by edge lighting.

US 2003/0054887: Discloses a casino sign for displaying gaming limits.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ross A. Williams whose telephone number is (571) 272-5911. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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1/20/06

XUAN M. THAI
SUPERVISORY PATENT EXAMINER
TC3700